



NAVAL AVIATION VISION  
2020







# NAVAL AVIATION ROLES AND CURRENT THREATS





# ENDURING ROLES OF THE NAVY

U.S. Navy Carrier Strike Groups (CSGs) are the global standard for sea-based airpower, representing an unmatched capability to strike targets on land and sea. For over 60 years, the aircraft carrier has signified the resolve of the United States to maintain regional stability and peace. Most recently, Operations Enduring Freedom (OEF) and Iraqi Freedom (OIF) demonstrated the fundamental importance of the large-deck carrier to our national security, projecting the will of the United States far from the homeland, without reliance on host nation support.

In the 21<sup>st</sup> century, the *NIMITZ*-class carrier and its embarked air wing will continue as the centerpiece of Naval Aviation's forward presence and power projection. *CVN 21*, the next class of aircraft carrier, will soon join them bringing state-of-the-art, networked, warfighting systems to dominate the sea-land-air battlespace. When the President of the United States asks, "Where are the carriers?" they will be ready, just as they have always been, to surge forward, turn into the wind, and assume whatever role is required: full-scale Joint/combined operations, presence, strike, surveillance, humanitarian assistance, small-scale contingency operations, and special operations. Their readiness and agility will offer our national leadership flexible, scalable, and sustainable options.





Listed below are the enduring roles of the U.S. Navy and Marine Corps. They demand the formidable presence and striking power of our Carrier and Expeditionary Strike Groups (ESGs), armed with Naval Aviation's best tactical aircraft and weapons systems.

- **Assurance and Deterrence**

A forward-deployed Navy and Marine Corps, ready to project power, shape events, deter conflict, and defeat aggression, demonstrates our nation's commitment to its allies and friends.

- **Command of the Seas**

Our Naval Forces guarantee freedom of the seas, and in so doing, preserve the vitality and well-being of our nation and the international community.

- **Power Projection**

The U.S. Navy and Marine Corps project power to disrupt, deny, and destroy hostile forces. Naval vessels are sovereign U.S. territories that deploy rapidly and flexibly around the globe with no requirement for host nation support, and no restrictions imposed by territorial boundaries.

- **Homeland Defense/Security**

Naval Forces are the first line of defense for the American homeland, protecting our shores by keeping attacks at bay far across the seas. Deployed forward, our forces detect, deter, and interdict attacks by hostile nations and emerging non-state actors.



# CURRENT THREATS

U.S. Navy and Marine Corps forces face persistent and emerging strategic challenges in four broad categories.

## **Asymmetric Threats**

Asymmetric warfare is a significant 21<sup>st</sup> century challenge. The antithesis of traditional, “army-on-army” warfighting, irregular asymmetric warfare is the modus operandi for terrorist organizations and the impetus behind the Global War on Terror (GWOT). Asymmetric attacks on U.S. Naval Forces could involve submarine warfare in littoral waters, or “swarming” by vast numbers of small, fast vessels. Combating this threat will take agility, flexible response, and a transformation of ordinary Naval and Joint doctrine.

## **Catastrophic Threats**

Weapons proliferation continues to cause concern, as does the circulation of Weapons of Mass Destruction (WMD), including Chemical, Biological, and Nuclear (CBN) weapons. Technological advances have made WMDs easier to develop, and non-state actors, such as terrorist organizations, threaten to gain access to CBN weapons as well. Ballistic missiles threaten our deployed forces and the U.S. homeland, dictating the need for sea-based Theater Air and Missile Defense (TAMD).

## **Disruptive Threats**

Globalization is enabled by technological innovation and refers to the interconnectedness of economics, transportation, and communications. The world’s dependency on this interconnectedness is a considerable vulnerability, because it creates opportunities for subversive organizations with limited resources to cause significant damage. Crises once viewed as regional quickly become global in scope and implication, affecting critical infrastructures worldwide. Cyber-technology, Directed Energy Weapons (DEWs), and Anti-SATellite (ASAT) weapons are disruptive instruments that warrant legitimate concern.

## **Traditional Threats**

Rogue states that seek to reduce U.S. influence in their regions will continue to present traditional threats. Of particular concern are their large conventional militaries and interest in acquiring nuclear weapons. In addition, rising global powers are modernizing and expanding their naval forces for blue water operations. In some cases, their level of economic and military strength is comparable to that of the United States, presenting difficult diplomatic challenges.







A group of military personnel in various uniforms standing in front of a helicopter. The personnel are looking towards the right. The background is a clear sky.

# NAVAL GUIDANCE

The Navy and Marine Corps contribute uniquely to the Joint/Coalition Force, projecting power from the Sea Base. With improved operational availability and distributed operations, Naval Forces create increased uncertainty for potential adversaries.

Sea Power 21 will guide Naval Aviation's support of CSGs, ESGs, Special Operations, maritime interdiction, and Marine Corps deep strike and ballistic missile defense. Stability operations, counterinsurgency, economic interdiction, cyber war, and space operations will all become part of the Navy and Marine Corps' operational focus, requiring extensive Joint-service integration and coalition force strategies. Dissimilar forces will be integrated into unique force packages creating multiple options for theater commanders. Logistics chains will be lean, providing the right resources at the right time. Naval Forces will perform a broad range of missions, from information warfare to military-to-military contacts to humanitarian support, such as the medical and supply assistance provided by the *USS ABRAHAM LINCOLN* (CVN-72) CSG following Southeast Asia's catastrophic tsunami.

The 21<sup>st</sup> century Navy and Marine Corps will seize the initiative through speed, access, and persistence. They will secure battlefield access and maritime dominance through high operational availability. The flexibility inherent to the Fleet Response Plan (FRP) will combat the uncertainties of asymmetric warfare, and current readiness will be leveraged to provide a measured response, aligned with the intentions of our civilian and military leadership.







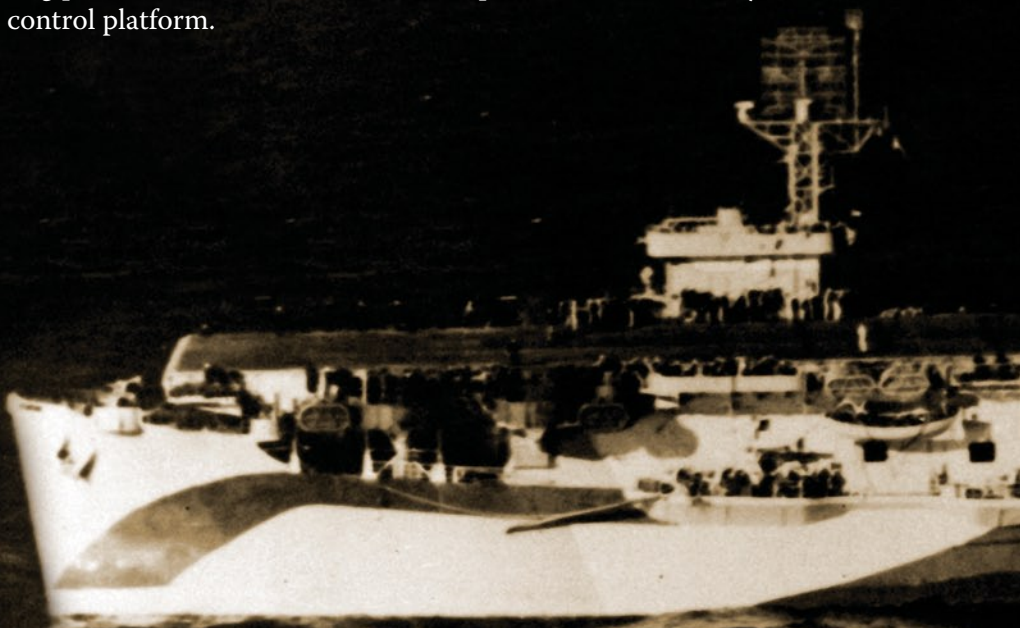
# EVOLUTION OF U.S. NAVAL AIR POWER: NAVY AND MARINE CORPS AVIATION

The history of U.S. Naval Aviation reflects the complementary roles and capabilities of two services—the U.S. Navy and U.S. Marine Corps. It is the story of the development of the large-deck aircraft carrier and its deployed air wing (which since early days has included the Marines), as well as the role of the Corps in providing Close Air Support (CAS).

The services both adopted aviation in the years before World War I—the Navy in 1911 and the Marine Corps in 1912. Under the leadership of visionary commanders such as ADM Joseph M. Reeves, prior to World War II, the Navy developed the necessary tactics, technology, and organizations to turn Naval Aviation into a powerful, sea-based striking force. Simultaneously, Major Roy Geiger, USMC, Director of Marine Corps Aviation in the mid-1930s, was guiding the Corps' development of CAS. In stability operations in the Caribbean, for example, Marines employed aerial reconnaissance and early dive-bombing tactics against guerrillas hiding in thick jungles. Another important development was the creation of the Fleet Marine Forces, which placed Marine Air Wings (MAWs) on aircraft carriers in support of amphibious warfare.

During World War II, the Navy relied on *ESSEX*-class large-deck carriers and “jeep carriers” (CVEs) to transport Navy and Marine Corps air squadrons to the fight. At Midway, that meant air-to-air combat, while at Guadalcanal, the mission was CAS for Marines on the ground.

The Korean War reinforced the significance of carriers as their embarked air wings responded rapidly to the invasion of South Korea. *USS FORRESTAL* (CV-59) was commissioned in 1955 as the first “supercarrier” designed to handle high-performance jets, and six years later, *USS ENTERPRISE* (CVN-65) was commissioned as the Navy's first nuclear-powered aircraft carrier. “Big E's” standards for speed, endurance, and striking power solidified the role of the “supercarrier” as the Navy's preeminent sea strike and sea control platform.









The Cold War era highlighted the rising importance of other aircraft types—particularly helicopters, Short TakeOff/Vertical Landing (STOVL) aircraft, and tilt-rotor aircraft. Deployed from either large-deck carriers or amphibious assault ships, these platforms greatly enhanced the striking power of the Navy/Marine Corps Team. The MV-22 *Osprey* tilt-rotor, assault support aircraft, combines fixed-wing and rotary-wing features to enhance tomorrow’s striking power even more.

A higher standard in carrier-based aviation was introduced in 1975 with the commissioning of *USS NIMITZ* (CVN-68), the first in a class of ten, large-deck, nuclear powered aircraft carriers. The tenth and last *NIMITZ*-class aircraft carrier will be *USS GEORGE H.W. BUSH* (CVN-77), expected to join the Fleet in 2009.

Now under development is the *CVN 21*-class, the 21<sup>st</sup> century aircraft carrier, with an innovative design that dramatically increases the Navy’s capability to project “presence with a purpose.” The *CVN 21*-class will have better defenses and weapons, increased automation and improved command and control from a new integrated weapons system, a redesigned flight deck, improved propulsion and electrical generation, and better aircraft launch-and-recovery systems. These improvements will reduce costs, enhance effectiveness, and fully integrate the aircraft carrier and its strike group with the Joint Services so that our Sea Warriors can dominate the battlespace.



The speed, agility, and versatility of the aircraft carrier and amphibious assault ships, combined with their Carrier Air Wings (CVWs) and Marine Expeditionary Units (MEUs), have been demonstrated time and again. Often the first to respond, the CSG, ESG, and their warfighting contingents are invaluable instruments of American diplomacy. They are the cornerstones of Naval forward presence, bringing the fight forward with unquestionable force, and upholding the U.S. Navy and Marine Corps heritage of victory at sea.

